

John M. Guynn

From:

Randy Smith [rsmith@earthshell.com]

Sent:

Saturday, September 17, 2005 6:05 PM

To:

John M. Guynn

Subject:

FW: Update Wrap Model

Attachments: Wrap Model - Rev 007 101501 - SIMPLE.xls

Here are the wrap models.

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From: Matt Loos

Sent: Tuesday, October 16, 2001 9:45 AM

To: Donna Balinkie; Randy Smith; Kishan Khemani

Cc: Scott Houston; Matt Loos Subject: Update Wrap Model

Folks,

Senior management has requested that we simplify the wrap model with respect to assumption input, and flexibility of use. There have been several iterations to achieve this goal. The attached wrap model addresses those issues as well as other improvment requests. If I ignored or misapplied any suggestions or requirements, or some additional requirements have surfaced since we last spoke, please contact me immediately.

Wrap Weight

The wrap costing model is based upon the wrap's weight.

1) For some examples, the weight and dimension are given, and drive the thickness. In this case, we are zeroing in on the thickness for improved economics. We know the desired weight, but what is the required thickness?

2) In the more common case, thickness and dimension are given, and we calculate the weight. We know the desired dimension, but what is the weight?

Given these two scenarios, the model has been improved to easily switch from one case to the other, depending on what is known. The model as distributed today has thickness and dimension as givens and the <u>weight is calculated</u>. If the weight and dimension are known and you require calculating the thickness, you need to type in 'Yes' into cell C19. This triggers the cost model (specifically cell L17) to look at cell C23. Please let me know if you would like training on how to use this added feature.

Wrap Density

The wrap consists of several raw materials of varying density. In order to calculate the wrap density properly, we consider the density of each component. The current wrap density calculation properly considers the successive steps of combining the raw materials and the resulting density at each step (First step: combine eastar and filler to create papermatch. Second step: combine papermatch and biomax to create the wrap).

Please contact me with questions is this model is still not as simple and useful as you require.

Matt

Distribution 10/16/01: Donna Randy Scott Kishan

Version changes listed by date (most recent at top)

Assumptions link/Input Linked to another tab Drives a link to a tab Calculated

Light Yellow

furquoise (Color Scheme just under Turquoise)
(Color Scheme just to the left of Lavender) Light Green

Version 007 10-15-01 - SIMPLE - Matt Loos

- 1- Added detail for resin densities in order to calculate final density of the wrap
- 2- Added yes/no trigger to how gram weight is used by the wrap costing model
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Version 007 10-11-01 - SIMPLE - Matt Loos

Version 007 10-10-01 - SIMPLE - Matt Loos Version 007 10-08-01 - SIMPLE - Matt Loos

Version 007 10-08-01 - Matt Loos

/ersion 007 09-26-01 - Matt Loos

Version 007 09-18-01 - Matt Loos

Version 007 09-15-01 - Matt Loos Version 007 09-11-01 - Matt Loos

Version 007 08-16-01 - Matt Loos Version 006 06-06-01 - Matt Loos

/ersion 006 04-18-01 - Matt Loos

Version 005 04-05-01 - Matt Loos Version 004 03-09-01 - Matt Loos /ersion 003 02-20-01 - Matt Loos Version 002 11-27-00 - Matt Loos Version 001 11-13-00 - Matt Loos

Version 000 11-07-00 - Matt Loos

Changes 9/19/2005 - 6:45 PM

Sandwich Wrap - Biomax/Eastar - Mono-Layer Film 12" x 12"

50% Biomax - 4026, 15% Eastar Bio GP / 35% Filler - T4338ES

Cost/1000	4.41 1.20 0.22 0.20	6.12	3.60	0.83	10.56	90'0	10.64	3.19	13.83
Price/LB \$	110 100 (g) 0.09	0.76	0.45	12.0%	0.87				
mat req'd <u>g/piece</u>	0.54 0.54 7.13	3.63	3.63						
Weight Mix ratios <u>Fin.Prod.</u>	50.0% 15.0% 31.0% ()	100.0%		g conversion				%0c	
Daw Materiale	(a) (e) Filler Assume CaCO2	Total Raw Materials	(c) Combined converting process	(b) Material Loss Allowance during conversion	Subtotal Raw Mat./Formulation	Secondary Packaging	Total Cost of Manufacture	Markup	(d) Target Selling Price
Value Units	1.35 g/cc 1.25 g/cc 2.25 g/cc	1.65 g/cc	NO 27	23.7 microns 12 inch 12 inch	3.63 grams	YES 23.7 microns	12 inch	12 inch 3.63 grams	
Assumptions	Biomax Density Eastar Bio Density Filler Density	Wrap Density	Weight variable (yes/no):	riim I nickness Wrap Width Wrap Length	Wrap Weight	Weight calculated: Film Thickness	Wrap Width	Wrap Length Wrap Weight	

- (a) Filler assumed to be compounded into one of the resins by one of the resin manufacturers.
- (b) Assumes large quantity runs where the start-up loss is 'amortized' to an effective loss of less than 1%. Current observations are Casting (12.5%), Printing (3%), and Perforating (1%) vendor observations.

- (c) Could be either one of the four following in-line converting processes:

 A) Cast Film, MDO, Slit, Print and Perforate on a roll,
 B) Cast Film, MDO, Slit, Print and Sheet flat in a box,
 C) Blown Film, Slit, Print and Perforate on a roll,
 D) Blown Film, Slit, Print and Sheet flat in a box.
 (d) FOB converter. Freight to Distribution Center not included.
 (e) Targeting \$0.65 to \$0.71 for 'filled' Eastar masterbatch.
 (f) Papermatch has 31% CaCO2 and 4% TiO2.
 (g) Current quote for wrap-specific CaCO2 @ 2 micron thickness for \$0.11.
 Current quote laminate-specific CaCO2 @ 25 micron thickness for \$0.0195

Sandwich Wrap - Biomax/Eastar - Mono-Layer Film 10.5" x 13"

50% Biomax - 4026, 15% Eastar Bio GP / 35% Filler - T4338ES

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Cost/1000 \$	4.18 1.14 0.21	5.80	3.42	0.79	10.01	0.08	10.09	3.03	13.11
Price/LB \$	1.10 1.00 (9) 0.09	97.0	0.45	120%	0.87				
mat req'd g/piece	1.72 0.52 1.07	3.44	3.44						
Weight Mix ratios Fin.Prod.	50.0% 15.0% 31.0% ()	100.0%		ig conversion				% 0 6	
M of the state of	raw Materials. Biomax 4026 Eastar Bio - GP (a) (e) Filler - Assume CaCO2 Whitener - TIO2	Total Raw Materials	(c) Combined converting process	(b) Material Loss Allowance during conversion	Subtotal Raw Mat./Formulation	Secondary Packaging	Total Cost of Manufacture	Markup	(d) Target Selling Price
Value Units	1.35 g/cc 1.25 g/cc 2.25 g/cc	1.65 g/cc	NO		•	YES microns	10.5 inch	3.44 grams	
Assumptions	Biomax Density Eastar Bio Density Filler Density	Wrap Density	Weight variable (yes/no):	Wrap Width Wrap Length	Wrap Weight	Weight calculated: Film Thickness	Wrap Width	Wrap Length Wrap Weight	

- (a) Filler assumed to be compounded into one of the resins by one of the resin manufacturers.
- (b) Assumes large quantity runs where the start-up loss is 'amortized' to an effective loss of less than 1%. Current observations are Casting (12.5%), Printing (3%), and Perforating (1%) vendor observations.
 - (c) Could be either one of the four following in-line converting processes:

- (a) Forgetting \$10.0 Stit, Print and Perforate on a roll,

 B) Cast Film, MDO, Silt, Print and Sheet flat in a box,

 C) Blown Film, Silt, Print and Perforate on a roll,

 D) Blown Film, Silt, Print and Sheet flat in a box.

 (d) FOB converter. Freight to Distribution Center not included.

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 Current quote laminate-specific CaCO2 @ 25 micron thickness for \$0.0195